REMARKS

Claims 2-5, 7-16, 18-21 and 23-43 are pending in the application. Independent Claims 32, 38, 42, and 43 have been amended to more particularly point out and distinctly claim the invention. Support for these amendments can be found throughout the specification as originally filed and at Paragraphs 17, 27-33, 45, 51, and 61 for example. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 101

Claims 2-5, 7-16, 18-21 and 23-43 stand rejected under 35 U.S.C. § 101 for allegedly being directed to non-statutory subject matter. Applicants respectfully traverse this rejection as applied to the amended claims. Independent Claims 32, 38, 42, and 43 have been amended to recite features of a computer model that analyzes data by using at least one method of analysis selected from the group consisting of statistical, egocentric network, sociometric, and network visualization analyses, and combinations thereof, to determine an output value corresponding to a condition of a collaborative relationship.

Patentable subject matter under §101 includes any invention that produces a "useful, concrete, and tangible result" as set forth by the Federal Circuit in *Bank v. Signature Financial Group, Inc.*, 47 U.S.P.Q.2d 1596, 1601-1602 (Fed. Cir. 1998). In *State Street*, a model transformed data to a final share price, and this was found to constitute a useful, concrete and tangible result, which was recorded and relied upon for reporting and regulatory activities. The invention as claimed in Claims 2-5, 7-16, 18-21 and 23-43 is a computer model that generates an output value relating to a condition of a collaborative relationship that facilitates business decisions, including resource allocation.

The output values generated by the inventive computer model are useful, concrete, and tangible results and have utility because they are used to determine a condition of a collaborative relationship (*e.g.*, health or effectiveness). In a collaborative relationship (*e.g.*, a business partnership) that seeks mutual goals, the computer model is a decision-support tool that enables informed resource allocation based upon the model's output value for assessing a relationship status. See Applicants' specification at Paragraphs 14 and 34, for example. By obtaining a value that correlates to the condition of such a collaborative relationship, issues within the relationship can be identified and addressed as necessary. Further, a tangible output value that indicates the status of a relationship is useful for determining whether or not to invest resources (*e.g.*, money, human resources, and time) in such a relationship. This finds particular utility for relationships that have a pecuniary nature, including business and institutional partnerships.

The amendments to the claims clarify that the model performs certain specific types of analysis of input data. It is the model that computes an output value via such analysis, not a user. For further clarification, the claims have been amended to clarify that inputted data relates to the collaborative relationship, but that it is the model that analyzes such data and includes components of level of joint work, level of communication, quality of interaction, and connectivity of social structure. The model analyzes data to calculate a weighted value for each of the respective components and thus generates an output value. The output value relates to a condition of the collaborative relationship.

Further, by inputting certain hypothetical data into the model, the model output can predict whether a weak relationship between institutions can be salvaged by improving certain aspects of the relationship, *e.g.*, communication, or the model can diagnose where the strengths and weaknesses lie in various collaborative relationships by selectively inputting data related to different scenarios. The Office Action points to portions of the specification (Paragraphs 15 and 17) that describe the capability of the model to predict hypothetical relationships between actual entities or hypothetical scenarios (*e.g.,* to have predictive capabilities) for existing collaborative relationships, and the variety of factors that impact the effectiveness of a relationship. A model that accurately analyzes real or theoretical data has utility even though it may also have predictive capability. Further, the portions of the specification that describe complex aspects of collaborative relationships underscore the difficulty in inventive problem, namely that the presently claimed invention simplistically and accurately models such complex dynamic systems. While the input data can originate from an existing organization, a hypothetical organization, or hypothetical scenarios for existing organizations and collaborative relationships, the computer model generates a reproducible, concrete tangible output value. The output value does not change for a given set of circumstances (*i.e.,* when the same data is input, the same output value is generated). The model is powerful in that it can generate a reproducible output value related to a condition of the relationship irrespective of whether the input data is “real” or “hypothetical,” upon which a decision can be based.

With regard to the rejection to Claims 42 and 43, Applicants submit that the amendments to the claims have removed any subjectivity of the data input by specifying that the data pertains to joint work, communication, interaction, and social structure of the collaborative relationship. The amended claims recite that it is the model itself having the components including level of joint work, level of communication, a quality of interaction, or a connectivity of social structure. The model analyzes data and creates a weighted value for each of these components, which is then used to generate the output value that determines the effectiveness of the relationship.

Similarly, Claims 32 and 38 have been amended to specify that analysis conducted by the model to create the components is at least one method of analysis selected from the group consisting of statistical, egocentric network, sociometric, network visualization analyses, and combinations thereof to highlight the fact that the analysis is not subjective, but conducted by established and known methods of analysis employed in a new computer model.

Patentable subject matter includes any invention that produces a "useful, concrete, and tangible result." *Id.* The computer models and methods of Claims 2-5, 7-16, 18-21 and 23-43 produce useful, concrete, and tangible results. As set forth in the MPEP at 2107.01 and in the "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" published in the Nov. 22, 2005 O.G., a useful result is:

i) specific – meaning that the claimed invention is specific to the subject matter claimed;

ii) substantial – in that the claims define a "real world" use; and

ii) credible - in that there must be proof of total incapacity of the claimed invention to achieve a useful result.

The results from the claimed invention, independent Claims 42 and 43 are specific. The claimed methods of modeling a collaborative relationship analyze data related to the collaborative relationship through a computer model. The computer model generates an output value that determines a condition of the collaborative relationship. Thus, these claims are specific to modeling collaborative relationships between entities. The output value generated by the model has a “real world” use in that it associates a simple value with a complex relationship that determines a condition (*e.g.*, the health, effectiveness) of a relationship as a decision-making tool for resource investment. Lastly, the claimed methods of modeling generate repeatable output values, the accuracy of which can be validated and calibrated as necessary by various methods known in the art. *See* Applicants' Specification at Paragraph 39, for example. There is no evidence of total incapacity of the results, such that the results are not credible.

The analysis is the same for Claims 32 and 33. Claims 32 and 33 recite methods of developing a computer model for a collaborative relationship between distinct entities that analyzes data to establish a plurality of components that indicate an effectiveness of a relationship. The baseline value generated by the model provides a comparative assessment when compared with additional data. The model is specific to assessing effectiveness of a collaborative relationship, which has a real world application of accurately reducing the complexities of a collaborative relationship between distinct entities to a simple output value to inform decisions regarding resource allocation. As discussed above, there is no evidence or proof that such a model has no evidence of capacity to achieve the claimed results.

Additionally, the analysis of statutory subject matter includes determining whether the claimed result is tangible and concrete. A tangible claim must set forth a practical application. The present claims recite a practical application of modeling collaborative relationships between distinct entities, such that resource allocation can be easily determined with a computer model, without necessitating a complex analysis of the relationship on a case-by-case basis. Further, a concrete result is one that is repeatable, predictable, and produces substantially the same result. As addressed in Applicants' Specification, the accuracy of the model is validated and further can be calibrated to enhance precision. Inputting data into the claimed computer model generates the same output value for a given set of data, which enables a user to compare an output value to other known values (*e.g.*, baseline values) to determine a condition of a collaborative relationship. Without the repeatability and predictability of the model's analysis, the output value would be meaningless.

The Office Action is mistaken to suggest the inputting of data into the model related to hypothetical scenarios to generate predictive results equates with an inconsistent or non-repeatable result. The output value remains substantially repeatable and consistent when the same data is entered and analyzed by the model multiple times, whether the data is real or hypothetical. As such, the claimed invention is concrete, reproducible, and repeatable. Further, hypothetical data produces a valuable result as it relates to actual entities and their potential and/or ongoing collaborative relationships. Thus, Claims 2-5, 7-16, 18-21 and 23-43 constitute patentable subject matter.

Applicants respectfully submit that the courts, and the USPTO itself, have found similar and/or related technology to constitute patentable subject matter and that the present invention constitutes patentable subject matter under §101. Applicants respectfully request reconsideration of the claims.

REJECTION UNDER 35 U.S.C. § 112

Claims 2-5, 7-16, 18-21 and 23-43 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement as the claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. This rejection is respectfully traversed.

As described above, independent Claims 32, 38, 42, and 43 have been amended to more particularly point out and distinctly claim the invention. In this regard, the amended claims commonly recite that the computer model analyzes data by using at least one method of analysis selected from the group consisting of statistical, egocentric network, sociometric, and network visualization analyses, and combinations thereof. In this regard, Applicants' Specification at Paragraphs 27-33 fully describes each of these methods of analysis to one of skill in the art. As such, the amendments to Claims 32, 38, 42, and 43 clarify how the computer model of claimed invention operates, which is fully supported by the specification as originally filed and would not require undue experimentation for one of skill in the art. Accordingly, Applicants request reconsideration of the claims and withdrawal of the rejections.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

Dated: May 17, 2006

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